

REMARKS

Claims 1-5 and 7-23 are pending in this application. Claims 1, 4, 10, 12, 19 and 21 are amended in several particulars for purposes of clarity in accordance with current Office policy, to assist the examiner and to expedite compact prosecution of this application. Claims 22 and 23 have been newly added. The Applicant appreciates the Examiner's indication of allowability concerning claims 4 and 21.

I. Claim Rejections - 35 USC § 103

According to MPEP 706.02(j), the following establishes a *prima facie* case of obviousness under 35 U.S.C. §103:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20

USPQ2d 1438 (Fed. Cir. 1991).

A. Claims 1-3, 5, 7-10, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over previously cited Komaki et al (USPN 6236160; "Komaki") in view of previously cited Kaake et al (USPN 6307318; "Kaake"). The Applicant respectfully traverses.

1. In regards to claims 1, the Examiner stated that Komaki discloses in figures 3 and 7, a first (1) and second (2) substrate opposing one another; a plurality of first electrodes (3b) formed on a surface of the first substrate facing the second substrate, and a first dielectric layer (5) covering the first electrodes, a plurality of main barrier ribs (12) integrally formed on a surface of the second substrate facing the first substrate which define a plurality of discharge cells (11); and Komaki further discloses a plurality of electrode barrier ribs (9) formed on the second substrate between the main barrier ribs into a plurality of partitioned discharge cells, the partitioned discharge cells for each of the discharged cells accommodating a phosphor layer (10) of the same color, and a discharge gas provided in the discharge cells. (Komaki, col. 6, line 46); Komaki is silent to a second electrode and a second dielectric layer being formed on a distal end of each of the electrode barrier ribs; however, Kaake teaches in figure 14 that a second electrode (92) and a second dielectric layer (94) may be formed on a distal end of the barrier ribs col. 2, ll. 47-50 and col. 3 ll. 60-61.

However, first, Komaki or Kaake (or even Hirao) when combined fail to teach or suggest there being no materials for electrode or dielectric layers provided to innermost portions between the barrier ribs of said main barrier ribs and said electrode barrier ribs. For example, Komaki includes an electrode protection layer or white dielectric layer 8 (col. 4, lines 36-39 of Komaki) between the ribs 9 and 12.

Moreover, since the Examiner modified Komaki with Kaaki, then the dielectric layer 44 and electrodes 42 would also be in between the ribs, since the Examiner needs the dielectric layer 94 and the metal layer 92 on the ribs. The technique used in Kaaki would then create the dielectric layer 44 and 42 in between the ribs and there is no teaching in Kaaki to avoid such. Therefore, Komaki, individually or when modified by Kaaki includes either a dielectric or dielectric and electrode between the ribs rather than just on top of the ribs. It is impermissible within the framework of 103 to **pick and choose** from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one skilled in the art. *In re Wesslau* 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965); See also *In re Mercer*, 515 F.2d 1161, 1165-1166, 185 USPQ 774, 778 (CCPA 1975). Therefore, one cannot just say that only the dielectric layer or the electrodes from the ribs are to be used in the combination without taking into account the layers between the ribs in Kaaki.

The amendment to claim 1 is supported by the specification, for example in paragraph 15 and 87.

2. Regarding claims 2-3 and 20, the Examiner states that Komaki is silent to the exact height of the dielectric layers. However, the Examiner states that Kaake teaches in figure 14 that the second dielectric layer is formed on the second electrode, which is, formed the distal end of each of the barrier ribs. Kaake further teaches in figures 13-14, that a dielectric layer may be formed on every barrier rib using a method that will establish a height of an upper surface of the second dielectric layer and a third dielectric layer to be substantially the same, and this configuration improves large screen plasma displays by allowing for an easier manufacturing method. Kaake, col. 1, ll. 48-51. One would be motivated to make such a modification to Komaki's panel to allow for easier manufacturing. In paper no. 1004, the Examiner goes on to state in the response to the arguments, that Kaake's disclosed method of manufacturing the device will inevitably establish a height of an upper surface of the second dielectric layer (formed on the electrode barrier ribs 9) and a third dielectric layer (formed on the main barrier ribs 12) to be substantially the same; as taught by Kaake in column 4, lines 4-9, the method involves layering a common dielectric layer on the back glass substrate, then hot forming the gas discharge troughs and barrier ribs, thereby separating the common dielectric layer into different strips, which are subsequently layered on distal ends of the main barrier ribs and electrode barrier ribs; therefore, a height of the dielectric layers will be substantially the same since the dielectric layer is removed from a common layer at a substantially equal height. (emphasis added to comment).

Respectfully, the specification, nor the drawings of Kaake make such a teaching. The figure

alone cannot be used to show the height as specifically stated in the **MPEP §2125** under the heading “DRAWINGS AS PRIOR ART” and under the subheading “PROPORTIONS OF FEATURES IN A DRAWING ARE NOT EVIDENCE OF ACTUAL PROPORTIONS WHEN DRAWINGS ARE NOT TO SCALE”, the MPEP states “When the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value. *In re Wright*, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977).

Looking at the specification, there is also no such specific teaching concerning the height. The Examiner’s explanation is more of an extrapolation rather than actual teaching as the Examiner is assuming certain facts and stating that it will inevitably be of such a height when no such teaching is actually made. As mentioned in MPEP 706.02(j), the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant’s disclosure as it here the case.

3. Regarding claims 8-10, the Examiner states that Komaki teaches in figures 2 and 7 that each discharge cell is divided into two partitioned discharge cells in which the same phosphor layer is formed, and the partitioned discharge cells include concave surfaces (the phosphor surfaces shown in figure 2), and a width of each of the partitioned discharge cells are formed to correspond to a color displayed by the particular portioned discharge cell. (emphasis added for comparison).

However, to use the phosphor surface to teach the concave surface is improper. The claimed invention states that the partitioned discharge cells include the concave surfaces and it is not concerning the phosphor layer. Looking to Kamaki, it is clear that the concave portion is only from

the deposit of the phosphors but not from the discharge cells formed by the main barrier ribs as claimed. For clarification purposes, claim 10 was amended to include that the discharge cells are defined by the main barrier ribs which includes the concave surface and not the manner in which the phosphor is deposited within the cells as shown in Komaki.

4. Regarding claim 19, the combination of Komaki and Kaake and even if combined with Hirao, fails to teach or suggest electrode and dielectric layers being formed on only the distal ends of the lattice walls. Looking at Komaki, the electrodes are not formed on the distal ends of the lattice walls, but actually below and between the lattice walls, while the dielectric layer 8 is between the lattice walls. In Kaake, there are electrodes and dielectric layers 42 and 44 between the lattice walls.

The amendment to claim 1 is supported by the specification, for example in paragraph 15 and 87 and also the drawings of the present invention.

B. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Komaki in view of Kaake, in further view of previously cited Hirao et al (USPN 6424095; “Hirao”). The Applicant respectfully traverses.

1. In regards to claim 11, the Examiner stated that Hirao teaches that this configuration is known to produce proper brightness ratios. Hirao, col. 2, ll. 9-31. The Examiner further stated that

one would be motivated to make such a modification to improve the overall image quality.

However, the claim in addition to discussing the large blue discharge cell, also states that discharge cells displaying green have a larger width than the discharge cell displaying red. Hirao only mentions as seen in col. 2, that the blue phosphor is the widest and that the green and red are narrower than the blue, but fail to teach or suggest that the green is larger in width than the red.

Moreover, in col. 2, lines 31-35, Hirao also teaches how there are problems with having a larger blue cell as related to the starting voltage.

2. Concerning newly added claim 22, the references fail to teach or suggest said second electrodes formed on said electrode barrier ribs realizing an electrical connection with said first electrodes formed on said first substrate accommodating discharge in areas between said second electrodes and said first electrodes and said second electrodes of said main barrier ribs not being electrically connected and acting as floating electrodes, or grounded to not affect the discharge operation, because as seen in Komaki, there is a first rib and second ribs (studs), but neither is differentiated as one being electrically connected and the other not so that discharge is accommodated or not. Hirao and Kaake also fail to teach or suggest such an element as the ribs are all identical for Hirao and Kaake.

Moreover, the references fail to teach or suggest said second electrodes formed on said main barrier ribs used to accommodate the height of said third dielectric layers of said main barrier ribs being substantially the same as a height of said second dielectric layers of said electrode barrier ribs

because Komaki, Hirao and Kaake do not use the second electrodes in such a manner.

The Examiner cites figures 13 and 14 of Kaake as making such a teaching of substantially same height, but as mentioned above, in the MPEP §2125, the use of drawings in such a manner is improper.

Moreover, Kaake also does not teach that the second electrodes is used in such a manner where they are there for accommodating the height.

The newly added claim 22 is supported, for example, by paragraphs 63 and 67 of the present invention.

3. Concerning the newly added claim 23, the combined references fail to teach or suggest the widths and heights of discharge cells being adjusted according to the color displayed, the widths and depths of the partitioned discharge cells are adjusted to control the areas of the phosphor layers to accommodate the brightness ratios of the light emitted from the discharge cells being made to conform to established brightness ratios without reducing the input signal levels.

Claim 23 is supported by the eighth embodiment of the present invention as seen in for example paragraphs 206, 207.

II. Withdrawn unelected claims 12 through 18

Claim 12 was amended to include the features of claim 1 and when claim 1 is allowed, then according to MPEP §821.04 in the *In re Ochiai* rejoinder, when there is even a proper restriction between product and process claims and when the product claims are elected, and the product claims are allowable, the process claims that include all the limitations of the allowable product claims would also be allowable.

III. Allowable Subject Matter

Claims 4 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 4 and 21 have been amended according to the suggestion of the Examiner and therefore, claims 4 and 21 should be allowed.

In view of the foregoing amendments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. If there are any questions, the examiner is asked to contact the applicant's attorney.

A fee of \$450.00 is incurred by this Amendment for the addition of two (2) independent claims above three (3) and the addition of one (1) claim above twenty-one (21). Applicant's check drawn to the order of Commissioner accompanies this Amendment. Should there be a deficiency in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,



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Folio: P56664
Date: 21 January 2005
I.D.: REB/SS